providing a non-luminescent microporous membrane formed by a phase inversion process, the process comprising the acts of:

formulating a dope comprising a solvent, one or more non-solvents, opaque solids, and polyamide(s);

mixing the dope to cause dissolution of the polyamide and opaque solids therein;

producing an opaque solids-filled phase inversion dope; casting a portion of the opaque solids-filled phase inversion dope; and

quenching the cast portion of the opaque solids-filled phase inversion dope to form a non-luminescent, microporous membrane;

providing a surface treatment;

applying the surface treatment to the non-porous substrate; and intermingling the non-porous substrate having the surface treatment with the non-luminescent, microporous membrane such that the non-porous substrate is sufficiently covalently bonded to the non-luminescent microporous membrane wherein the combination produced thereby is useful in microarray applications.

2. The method of claim 1 wherein the surface treatment is selected from the group comprising:

3-aminopropyl triethoxysilane, N-(2-aminoethyl)-3-aminopropyl trimethoxysilane, 3-glycidoxypropyltrimethoxysilane, (10-carbomethoxydecyl) dimethylchlorosilane or 2-(3,4-epoxycyclohexyl)-ethyltrimethoxysilane.

- 3. The method of claim 1 wherein, the surface treatment comprises a 3-aminopropyl triethoxysilane followed by treatment with a polyamido-polyamine epichlorohydrin resin.
- 4. The method of claim 1 wherein, the non-porous substrate is selected from the group comprising:

glass, Mylar, ceramic, acrylic, polypropylene, polycarbonate, polysulfone, polyamide and polyaramid.

- 5. The method of claim 1 wherein, the non-porous substrate is glass.
- 6. The method of claim 1 wherein, the non-porous substrate is a polyester.
- 7. The method of claim 1 wherein, the non-porous substrate is Mylar.

- 8. The method of claim 7 wherein, the surface of the Mylar is oxidized with sulfuric acid or corona discharge to enable it to bond to a polyamido-polyamine epichlorohydrin polymer.
- 9. The method of claim 1 wherein the opaque solids are carbon particles.
- 10. The method of claim 1 wherein the carbon particles are less than 5 microns in size.
- 11. The method of claim 1 wherein the carbon particles are substantially uniformly distributed throughout the non-luminescent microporous membrane.
- 12. The method of claim 1 wherein the carbon particles are partially incorporated into the non-luminescent microporous membrane.
- 13. The method of claim 1 wherein the carbon particles are substantially wholly incorporated into the non-luminescent microporous membrane.
- 14. The method of claim 1 wherein the non-luminescent microporous membrane is charge-modified.
- 15. A composite microarray slide, useful for carrying a microarray of biological polymers comprising:
- a substantially non-reflective microporous membrane which provides little fluorescence from about three hundred (300) nm to about seven hundred (700) nm formed by a phase inversion process, the non-reflective microporous membrane comprising:

a phase inversion support; and

a plurality of opaque solids that are substantially chemically non-reactive with the phase inversion support and intimately bound to, and/or partially/completely contained within, said phase-inversion;

a non-porous substrate; and

- a surface treatment, operatively positioned between the substantially non-reflective microporous membrane and the non-porous substrate, for sufficiently covalently bonding the non-porous substrate to the microporous membrane wherein the combination composite microarray slides produced thereby are useful in microarray applications.
- 16. The composite microarray slide of claim 15 wherein, the surface treatment is selected from the group comprising:

- 3-aminopropyl triethoxysilane, N-(2-aminoethyl)-3-aminopropyltrimethoxysilane, 3-glycidoxypropyltrimethoxysilane, (10-carbomethoxydecyl) dimethylchlorosilane or 2-(3,4-epoxycyclohexyl)-ethyltrimethoxysilane.
- 17. The composite microarray slide of claim 15 wherein, the non-porous substrate is selected from the group comprising:

glass, Mylar, ceramic, acrylic, polypropylene, polycarbonate, polysulfone, polyamide and polyaramid.

- 18. The composite microarray slide of claim 15 wherein, the surface treatment comprises a 3-aminopropyl triethoxysilane followed by treatment with a polyamido-polyamine epichlorohydrin resin.
- 19. The composite microarray slide of claim 15 wherein, the non-porous substrate is glass.
- 20. The composite microarray slide of claim 15 wherein, the non-porous substrate is a polyester.
- 21. The composite microarray slide of claim 15 wherein the, the non-porous substrate is Mylar.
- 22. The composite microarray slide of claim 15 wherein the membrane is selected from the group consisting of:

Nylon 66, Nylon 6, polysulfone, polyethersulfone, polyvinylidenediflouride (PVDF).

- 23. The composite microarray slide of claim 15 wherein the phase-inversion support comprises polyamides.
- 24. The composite microarray slide of claim 15 wherein the opaque solids are pigments.
- 25. The composite microarray slide of claim 15 wherein the opaque solids are carbon particles.
- 26. The composite microarray slide of claim 15 wherein the phase inversion support has been charge-modified.
- 27. The composite microarray slide of claim 15 wherein carbon particles are less than five microns in size.
- 28. The composite microarray slide of claim 15 wherein carbon particles are substantially uniformly distributed throughout the phase-inversion support.
- 29. The composite microarray slide of claim 15 wherein the carbon particles are partially incorporated into the phase-inversion support.

- 30. The composite microarray slide of claim 15 wherein the carbon particles are substantially wholly incorporated into the phase-inversion support.
- 31. The composite microarray slide of claim 15 wherein the phase-inversion support has been charge-modified.
- 32. Composite microarray slides, useful for carrying a microarray of biological polymers comprising:

an optically passive substrate comprising:

a phase-inversion support and opaque solids that are substantially non-reactive chemically with the phase-inversion support, in a weight ratio with the phase-inversion support such that the optically passive substrate absorbs light at substantially all wave lengths from about 300 nm to about 700 nm;

a non-porous substrate; and

- a surface treatment, operatively positioned between the optically passive substrate and the non-porous substrate, for sufficiently covalently bonding the non-porous substrate to the optically passive substrate wherein the combination composite microarray slides produced thereby is useful in microarray applications.
- 33. The composite microarray slide of claim 32 wherein the optically passive substrate comprises polyamide.
- 34. The composite microarray slide of claim 32 wherein the optically passive substrate is in the form of a membrane.
- 35. The composite microarray slide of claim 32 wherein the opaque solids are carbon particles.
- 36. The composite microarray slide of claim 35 wherein the carbon particles are less than about 5 microns in size.
- 37. The composite microarray slide of claim 35 wherein the carbon particles are substantially uniformly distributed throughout the optically passive substrate.
- 38. The composite microarray slide of claim 35 wherein the carbon particles are partially incorporated into the optically passive substrate.
- 39. The composite microarray slide of claim 37 wherein the optically passive substrate absorbs light at substantially all wavelengths from about 300 to about 700 nm.

- 40. The composite microarray slide of claim 32 wherein the phase-inversion support has been charge-modified.
- 41. The composite microarray slide of claim 39 wherein the optically passive substrate has a reflectance of no more than 50% of incident light at any wavelength within about 300 to about 700 nm.
- 42. The composite microarray slide of claim 32 wherein the phase-inversion support is hydrophilic.
- 43. The composite microarray slide of claim 42 wherein the phase-inversion support is skinless.
- 44. The composite microarray slide of claim 43 wherein the phase-inversion support comprises nylon.
- 45. The method of claim 1 wherein the polyamide(s) is selected from the group consisting of:

Nylon 66, Nylon 46, Nylon 6, polysulfone, polyethersulfone, polyvinylidenediflouride (PVDF).